DECLARATION OF GLENN BERNTSON REGARDING GOOGLE AD MANAGER AND GOOGLE ADSENSE

Redacted Version of Document Sought to be Sealed

1

2

3

4

5

6

7

8

UNITED STATES DISTRICT COURT

9

NORTHERN DISTRICT OF CALIFORNIA, OAKLAND DIVISION

10

CHASOM BROWN, *et al.*, on behalf of themselves and all others similarly situated,

Plaintiffs,

vs.

GOOGLE LLC,

Defendant.

Case No. 4:20-cv-03664-YGR-SVK

DECLARATION OF GLENN BERNTSON REGARDING GOOGLE AD MANAGER AND GOOGLE ADSENSE

Judge: Hon. Yvonne Gonzalez Rogers
Date: September 20, 2022
Time: 2:00 p.m.
Location: Courtroom 1 – 4th Floor

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

I, Glenn Berntson, declare as follows:

1.   I am the Engineering Director and a Lead of the Google Ad Manager team at Google. I oversee a team that facilitates and supports publishers advertising on their websites. In this declaration, I provide a summary of Google's Ad Manager platform and how it is used by publishers. I also describe the data that Google Ad Manager may receive when a user in private browsing mode ("PBM") visits a website that uses Google Ad Manager. I next describe multiple factors that affect whether Google Ad Manager actually receives, stores, and/or uses that data for any given visit to a website that uses Google Ad Manager. Finally, I address some errors and false assumptions made in Mr. Jonathan Hochman's expert report, submitted in this case. Except where otherwise indicated, I make this declaration based on my own personal knowledge and could competently testify thereto.

2.   Google AdSense and Ad Manager are Google services for publishers to manage advertising on their inventory.[1] To use Google AdSense or Google Ad Manager, the publisher must create an account, accept the relevant Google terms and program policies, and add ad tag code / script for each ad unit (location on the webpage where an ad will be shown) to the HTML code for their webpage. When a user visits a page to which the ad tag(s) have been added, the ad tags will be included in the HTML code delivered to the user's browser in response to the browser's request. When the user's browser encounters the ad tag, it will make a request for an ad from Ad Manager or AdSense.

3.   I am informed that Plaintiffs are asking the Court to certify two classes:

Class 1 - "All Chrome browser users with a Google account who accessed a non-Google website containing Google tracking or advertising code using such browser and who were (a) in 'Incognito mode' on that browser and (b) were not logged into their Google account on that browser, but whose communications, including identifying information and online browsing history, Google nevertheless intercepted, received, or collected from June 1, 2016 through the present" (the "Class Period").

---

[1] In Google Ad Manager, inventory is the ad space on a publisher's website or app where ads will be displayed; inventory is what publishers sell to advertisers or buyers. *See* GOOG-CABR-00024989 (https://support.google.com/admanager/answer/10064557).

Class 2 - "All Safari, Edge, and Internet Explorer browser users with a Google account who accessed a non-Google website containing Google tracking or advertising code using such browser and who were (a) in 'Incognito mode' on that browser and (b) were not logged into their Google account on that browser, but whose communications, including identifying information and online browsing history, Google nevertheless intercepted, received, or collected from June 1, 2016 through the present."

4.   I am informed that Plaintiffs allege that "Google Ad Manager is set up to automatically retarget a user based on information that Google has previously collected, whether this information is based on a persistent identifier (e.g., Google Analytics User-ID, X-Client-Data Header, supra), Google's fingerprinting (e.g., Approved Pixels, supra), or geolocation." TAC, ¶ 81. Google Ad Manager does not use "fingerprinting" to retarget a user, and has long-standing policies against using "fingerprinting" for any such purpose.[2] Nor does Google Ad Manager use "Google Analytics User-ID," "Chrome's X-Client Data Header," or "geolocation" for retargeting.

5.   I am informed that Plaintiffs allege that "Google has gained a complete, cradle-to-grave profile of users" and that Google "correlates and aggregates" PBM data-at-issue with non-PBM data through "fingerprinting," "Google cookies," "geolocation data," and "IP address information". TAC, ¶ 93. There is no single "complete, cradle-to-grave profile" of any user that includes the PBM data-at-issue. Google does not join the PBM data-at-issue with non-PBM or Google Account data, and has long-standing policies against joining unauthenticated data (i.e. PBM data Google received when users were not logged in to a Google Account) with authenticated data (i.e. data Google received when users were logged in to a Google Account).[3]

---

[2] GOOG-BRWN-00029326, "Device/App/Browser Fingerprinting and Immutable Identifiers Policy" ("Device/App/Browser Fingerprinting or Immutable Identifiers must not be used by any Google products or services for the purpose of: Tracking user behavior, including Ad measurement and prediction, Ad targeting, Recording preferences").

[3] GOOG-BRWN-00029004 at -006, "Log Data Usage Rules" ("You must not re-identify any individual from Anonymous or Pseudonymous data, in accordance with the User Data Anonymization Policy." "You must not correlate authenticated and non-authenticated information." "You must not fingerprint users for the purpose of associating a user's activity over time or across contexts ("tracking") or re-identifying them when you do not have access to actual identifiers such as cookies or GAIA IDs.")

1   6.   I am informed that Plaintiffs allege Google improperly collected the following

2   categories of information during the Class Period when users with a Google Account visited non-

3   Google websites that use certain Google web-services—such as Google Analytics and Google

4   advertising services (the "Services")—when those users were not logged into their Google Account

5   and were browsing in Incognito mode or the PBMs offered by Safari, Edge, or Internet Explorer:

6   (1) "[t]he 'GET request'"; (2) "[t]he IP address of the user's connection to the internet"; (3)

7   "[i]nformation identifying the browser software that the use is using, including any 'fingerprint'

8   data"; (4) "[a]ny 'User-ID' issued by the website to the user"; (5) "[g]eolocation of the user, if

9   available"; and (6) "[i]nformation contained in 'Google cookies'" (the "Data"). Third Amended

10 Complaint ("TAC") ¶¶ 63, 192. I am further informed that Plaintiffs refer to the X-Client-Data

11 header as a field they contend could be used to identify Incognito users. TAC, ¶ 96.

12   **A.   Overview of the Data Google Ad Manager Receives**

13   7.   Before Google Ad Manager can receive *any* of the categories of data at issue in

14 Paragraph 6 related to a user's visit to a specific website, Google Ad Manager scripts must have

15 been installed in the website's HTML code. These scripts may be viewed by any Chrome user by

16 visiting the webpage using Google Ad Manager and right-clicking on the webpage, selecting

17 "Inspect," and then viewing the "Sources." Other browsers have similar functionality.

18   8.   The Google Ad Manager scripts website administrators install on their properties are

19 not designed to know whether a user is browsing using a private browsing mode ("PBM"), or to

20 operate differently in that circumstance.

21   9.   When a user (in any brand of browser, whether in PBM or not) visits a website that

22 uses Google Ad Manager, Google Ad Manager may receive: (1) cookies that specific Google

23 domains previously set on the user's browser; (2) the HTTP request sent by the user's browser,

24 including the hostname, browser type, and language, and depending on the browser used, Java

25 support, Flash support, and screen resolution; (3) the URL of the website making the ad request to

26 Google Ad Manager, and/or the referrer URL; (4) the IP address assigned to the device on which

27 the browser is running; (5) the request for an ad to be served on a non-Google website and the ad

28

1 slot to be filled; (6) event data such as ad impressions or ad clicks; and (7) if the user is in Chrome

2 and a mode other than Incognito,[4] the browser's X-Client-Data Header.

3   10.   Google Ad Manager uses the data it receives from publisher websites to help its

4 customers (publishers) sell advertising space on their websites, *i.e.* monetize their inventory. The

5 type and source of data that Google Ad Manager uses for this purpose depends on many factors. For

6 example, if the user is signed into a Google Account, consented to the New Ads Control, and has

7 enabled Ad Personalization, and the publisher has enabled use of signed-in Google users' identities

8 in their Ad Manager settings to help the publisher monetize their inventory via personalized

9 advertising, and the user has not disabled the use of 3P cookies or is using a browser or mode that

10 automatically disables 3P cookies, then Google uses a cookie to identify the Google Account the

11 user is signed into. This is known as GAIA Keyed Serving ("GKS"). If the user is on a browser that

12 supports third-party cookies and is not signed into a Google Account while browsing, then Google

13 uses a cookie associated with a pseudonymous identifier called Biscotti. This is known as Biscotti

14 Keyed Serving ("BKS").

15   11.   Google does not link or join Biscotti Keyed Serving data with GAIA Keyed Serving

16 data, and maintains strict server-side segregation between these two types of data. Google has

17 implemented many protocols and processes to ensure that Biscotti values are not used to personally

18 identify users, and that data associated with Biscotti identifiers is not linked to information that

19 personally identifies a user. Additionally, a user can delete cookies, which includes Biscotti, from

20 their browser at any time, and in PBM mode, these cookies are deleted automatically at the end of

21 the session.

22   12.   As indicated in paragraph 6, Plaintiffs refer to IP address and "[i]nformation

23 identifying the browser software" as two separate categories of data. I am informed that Plaintiffs

24 have argued that by combining a user's IP address with the user-agent information about the user's

25

---

26 [4] Additional scenarios exist in which the X-Client-Data Header is empty even when the browser is
    not in Incognito mode, including: (i) a new browser instance (ii) the browser has not been used for
27 30 days or more; (iii) the Chrome server sends too many variation IDs to the Chrome browser
    thereby causing the Chrome browser to delete the header to keep it from becoming too large; and
28 (iv) a firewall prevents Chrome from receiving the variation IDs that are used to populate the X-
    Client-Data Header.

device, Google can uniquely identify users. This practice is referred to as "browser fingerprinting" in the online advertising industry. Google does not engage in "browser fingerprinting"—such as combining IP address and user-agent information—to identify or track users and, indeed, has policies that expressly prohibit that practice.

B.   A Multitude of Factors Affect Whether Google Ad Manager Receives, Stores, and/or Uses the Data

13.   If a PBM user visits a website that does not have Ad Manager scripts embedded in the website's HTML code, Google Ad Manager does not receive any data relating to that visit, regardless of the mode in which Chrome is being used.

14.   Whether Google *in fact* receives the categories of data identified above in paragraph 9, and whether or how Google stores and uses that data if it is received, depends on numerous factors, including (1) features and settings enabled by the particular website publisher, (2) features and settings enabled by the user in Chrome or in the user's Google Account settings, and (3) use of third-party software by the user. Each of these factors is explained in detail below.

1.   Publisher Actions and Publisher-Enabled Settings Affect Whether Google Ad Manager Uses The Data

15.   Whether Google Ad Manager uses the categories of data identified in paragraph 9 depends on the features and settings enabled by the particular website publisher. Publishers can use privacy controls in Google Ad Manager that limit, in whole or in part, how data is collected and used by Google Ad Manager when users visit their website, including in PBM. Google explains these Google Ad Manager publisher controls in documents that are publicly available online.[5]

16.   For example, a publisher can use the privacy & messaging tools in Google Ad Manager to create and display messages to present users with information about the publisher's advertising practices and obtain user consent for personalized ads. There are multiple mechanisms by which a publisher can prompt the user for consent to personalized ads, and for the user's response

---

[5] *See, e.g.*, GOOG-CABR-05558152 - 8155 (https://support.google.com/admanager/answer/ 10075997); GOOG-CABR-05558141 - 8143 (https://blog.google/products/admanager/making-it-easier-publishers-manage-privacy-and-messaging/).

Case No. 4:20-cv-03664-YGR-SVK
DECLARATION OF GLENN BERNTSON

1   to be sent to Google Ad Manager.[6] When Google Ad Manager receives an indication that a user

2   does not consent to personalized ads, Google Ad Manager will not use the user's GAIA identity or

3   any Biscotti cookie values, such as those associated with PBM activity, for providing personalized

4   ads.[7] Instead, the user is shown ads on the basis of other data, such as the content of the website the

5   user is visiting, time of day, and the user's coarse location (such as city-level, but not precise

6   location).

7   17.   The publisher can also opt in or opt out of delivering personalized ads. If a publisher

8   has opted out of personalized ads, Google Ad Manager will not use a user's GAIA identity or any

9   Biscotti cookie values, such as those associated with PBM activity, for delivery of personalized ads,

10 though Google Ad Manager may still use cookies for frequency capping (ensuring a user doesn't

11 see the same ad over and over again), aggregated ad reporting, and to combat fraud and abuse. With

12 respect to these latter uses, if the user is in PBM, Google Ad Manager would only use the cookie

13 placed during the PBM session (and later automatically deleted from the user's browser), since

14 previously existing cookies are not shared.

15   **2.   User Actions and User-Enabled Features That Affect Whether Google
                        Receives, Stores, And/Or Uses The Data**

16

17   18.   Individual user actions also affect whether Google Ad Manager receives, stores,

18 and/or uses the categories of data described in paragraph 9 through (a) browser-level settings on

19 their Chrome browser; and (b) account-level settings on their Google Account. If a user uses a PBM

20 without signing into their Google Account to visit a website that uses Google Ad Manager, the data

21 that Google receives is not tied to the user's identity or information that could personally identify

22 the user such as name, address, email address, or phone number. Google may associate certain of

23 the data it receives through Google Ad Manager with a cookie value, but the user can delete that

24 cookie from her browser anytime, and, Incognito mode (and other PBMs), the browser deletes
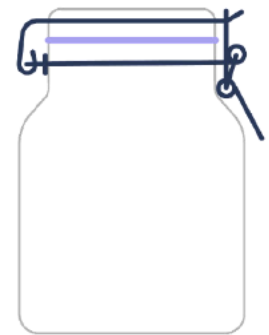
25

26

27 [6] *See, e.g.,* GOOG-CABR-00024684 - 4687
    (https://support.google.com/admanager/answer/7678538).

28 [7] *See, e.g.,* GOOG-CABR-00025259 - 5260
    (https://support.google.com/admanager/answer/9005435).

cookies automatically when the user closes the session. Since summer 2020, third-party cookies are blocked by default in Incognito mode on Chrome.

19.   When a user enters PBM on a browser, the browser creates a new cookie jar that only stores first-party cookies and third-party cookies if not blocked (the default setting on Chrome is for third-party cookies to be blocked in Incognito mode) for the duration of that PBM session, and those cookies are deleted when the PBM session ends. Because browsers create a new cookie jar for the PBM session, Google Ad Manager will not receive any cookie values set in a prior session (whether PBM or non-PBM). The diagrams below illustrates how cookies are stored in a browser for the PBM session.
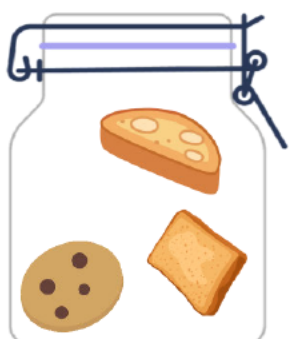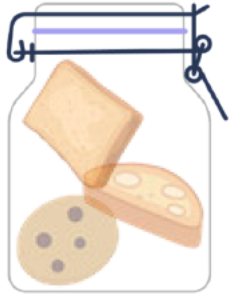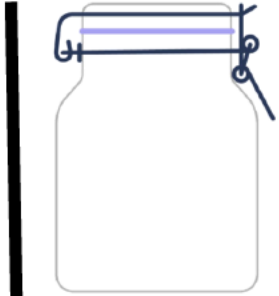
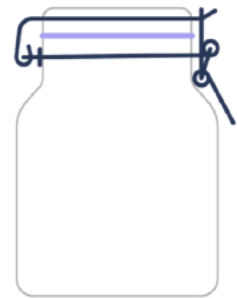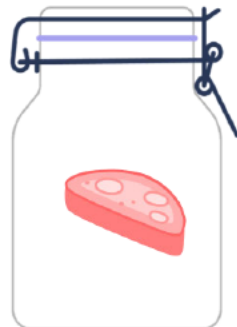|	
20. This empty jar represents a browser's local cookie storage on a brand new browser.	
21. If a user signs in to a Google Account on that browser (*e.g.*, by logging in at https://mail.google.com), a cookie associated with that Google Account is set on the browser. This cookie contains an encrypted ID, called a GAIA, which is used to identify the specific Google Account. This cookie remains on the browser while the user is signed in to their Google Account.	 • GAIA ID for USER@gmail.com

22. Over time, depending on the browser's cookie settings and the web pages visited, other cookies may be set. For example, if the browser is used to visit a non-Google web page on which the web page publisher has installed Google Ad Manager scripts, a cookie containing a unique encrypted Biscotti ID may be set.	 • GAIA ID for USER@gmail.com • Biscotti ID # 1 (2515782358150873158)
23. If the browser is used to visit a web page Google owns and operates, a cookie containing a unique encrypted Zwieback ID may be set. All of these cookies can exist on a browser at the same time.	 • GAIA ID for USER@gmail.com • Biscotti ID # 1 (2515782358150873158) • Zwieback ID # 1 (0xf5c156f144b9aa7f)
24. When the user enables PBM on her browser (*e.g.*, Incognito on Chrome), the browser creates a new cookie jar for the duration of that PBM session. That cookie jar does not contain any of the previously set cookies, or encrypted IDs stored in those cookies.	 • GAIA ID for USER@gmail.com • Biscotti ID # 1 (2515782358150873158) • Zwieback ID # 1 (0xf5c156f144b9aa7f)

Case No. 4:20-cv-03664-YGR-SVK
DECLARATION OF GLENN BERNTSON

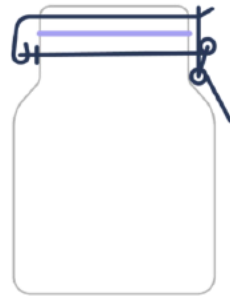|		
25.	The new cookie jar is only in operation until the end of the private browsing session.	
26.	When the PBM user visits a non-Google web page on which the web page publisher has installed Google Ad Manager scripts, and the browser permits third-party cookies to be set, a cookie containing a unique encrypted Biscotti ID may be set. That Biscotti ID is unique to the specific PBM. It has no relation to, and is not joined with, any cookies set during regular mode, or even a Biscotti ID set during a different PBM session.	• Biscotti ID # 2 (2483711983363751938)
27.	When the PBM user visits a web page Google owns and operates, a cookie containing a unique encrypted Zwieback ID may be set. The Zwieback ID is also unique to the PBM session. It has no relation to, and is not joined with, any cookies set during regular mode, or even a Zwieback ID set during a different PBM session.	• Biscotti ID # 2 (2483711983363751938) • Zwieback ID # 2 (0x43b763007d1ff50d)
28.	When the PBM user closes the session, the cookies that were set during that private browsing session are automatically and permanently deleted from the browser.	
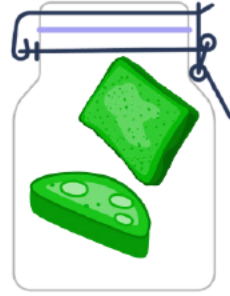
Case No. 4:20-cv-03664-YGR-SVK
DECLARATION OF GLENN BERNTSON

29. When the user opens a new PBM session, a new cookie jar is created that is only in operation until the end of the private browsing session.	
30. If a user returns to the same web pages they visited in the prior PBM session, new cookies containing new Zwieback and Biscotti IDs will be set.	• Biscotti ID # 3 (2464002382754152675) • Zwieback ID # 3 (0x6e21bea56616853b)
31. When a user closes the new PBM session, the cookies that were set during that session are automatically and permanently deleted from the browser.	

a)   **Browser-level settings on a user's browser affect data collection and/or use**

32.   Browser-level features and settings that affect whether Google Ad Manager receives the data described in paragraph 9 when a user is in a PBM, or how that data is used if received, include (a) opting out of ad personalization (when not signed in to a Google Account); (b) disabling "Block third-party cookies" on Chrome New Tab Page ("NTP"); (c) cookie blocking options in browser settings; (d) disabling JavaScript; and (e) installing ad-blocking extensions.

i.   Opting Out of Personalized Ads (for users not signed into a Google Account). A user can opt out of personalized ads even if they are not signed into a Google Account

-11-

Case No. 4:20-cv-03664-YGR-SVK
DECLARATION OF GLENN BERNTSON

1   (Google Account holders can also opt out of Ad Personalization, as described below),

2   and even if they are in PBM. There are multiple ways for a user to do so. For example,

3   a user can navigate to https://adssettings.google.com/anonymous or they could

4   navigate to https://adssettings.google.com/whythisad, where they can select a setting

5   to disable "Ad personalization on the Web," as shown in the following exemplary

6   screenshot:
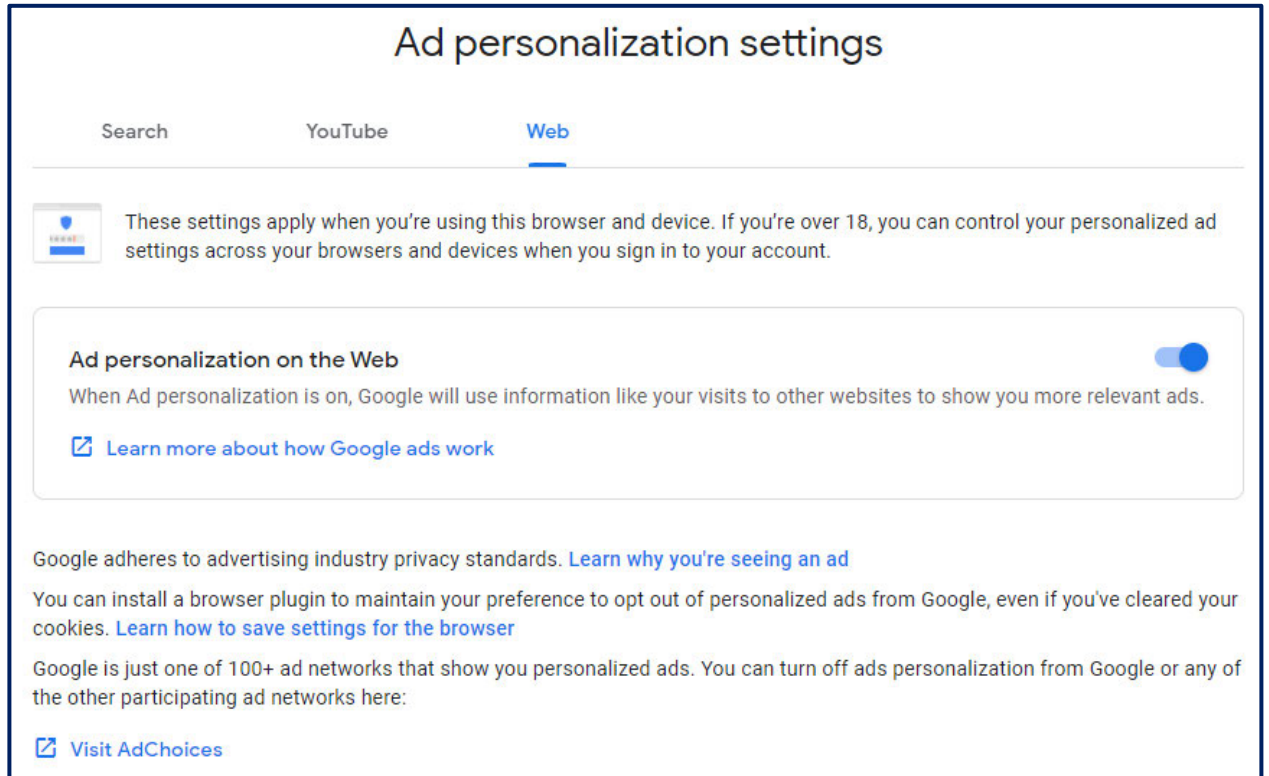
19   If a user opts out of ad personalization in this way, the browser in PBM will rewrite

20   the stored Biscotti cookie value to contain an "opt-out" value. If Google Ad Manager

21   receives an ad request with this "opt-out" value, Google Ad Manager will not use the

22   Biscotti cookie value for personalized ads.

23   A user can access the same ad personalization settings for Google by clicking

24   on the AdChoices icon -- -- in an ad that is displayed in their browser. If the ad

25   was served by Google, clicking on that icon will take the user to

26   adssettings.google.com/whythisad, which has a link to the ad settings page shown

27   above.

28

Case No. 4:20-cv-03664-YGR-SVK
DECLARATION OF GLENN BERNTSON

ii. Disabling "Block third-party cookies" on Chrome New Tab Page (NTP). Since July 2020, third-party cookies have been blocked by default in Chrome incognito. If a user disables "Block third-party cookies" on Chrome's NTP, and visits a website that uses Google Ad Manager, then Google may receive the data described in paragraph 6 with a third-party cookie that contains a Biscotti ID that is unique to the PBM session. If a user does not disable "Block third-party cookies" on Chrome's NTP and visits a website that uses Google Ad Manager, then Chrome does not set and Google does not receive any Biscotti cookie during the Incognito session.

iii. Enabling "block all cookies" in Chrome settings. Chrome's cookie settings, which are accessible via a drop-down menu or by navigating to chrome://settings/cookies, include an option to "block all cookies." When the user enables this feature, Chrome prevents websites and Google Ad Manager from setting or receiving any cookies. If all cookies are blocked in this manner, the Chrome browser will not send any cookies to Google Ad Manager. If the user elects to block all cookies in Chrome settings, all cookies will be blocked in Incognito mode. Below is an exemplary screenshot of this Chrome setting:
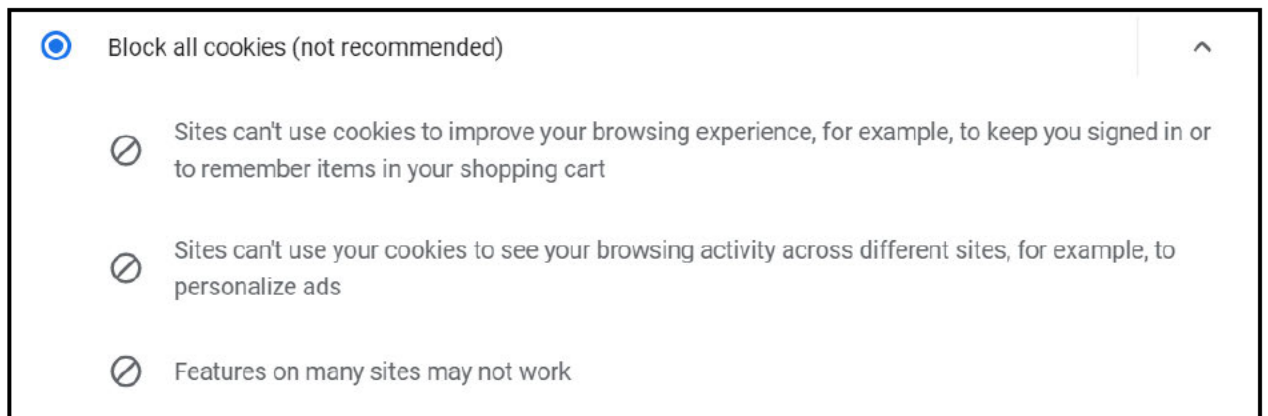
iv. Disabling JavaScript in Chrome settings. Chrome's JavaScript settings, which are accessible   via   a   drop-down   menu   or   by   navigating   to chrome://settings/content/javascript, include the following option: "Don't allow sites to use Javascript." When a user selects "Don't allow sites to use JavaScript," Chrome prevents websites from using JavaScript, including Google Ad Manager tags based

Case No. 4:20-cv-03664-YGR-SVK
DECLARATION OF GLENN BERNTSON

on JavaScript. If enabled, this setting will also work in Incognito mode. If JavaScript is disabled in this manner, the Google Ad Manager JavaScript tag will not be able to send information to Google Ad Manager when a Chrome user in PBM visits a website that uses Google Ad Manager. Below is an exemplary screenshot of this Chrome setting:
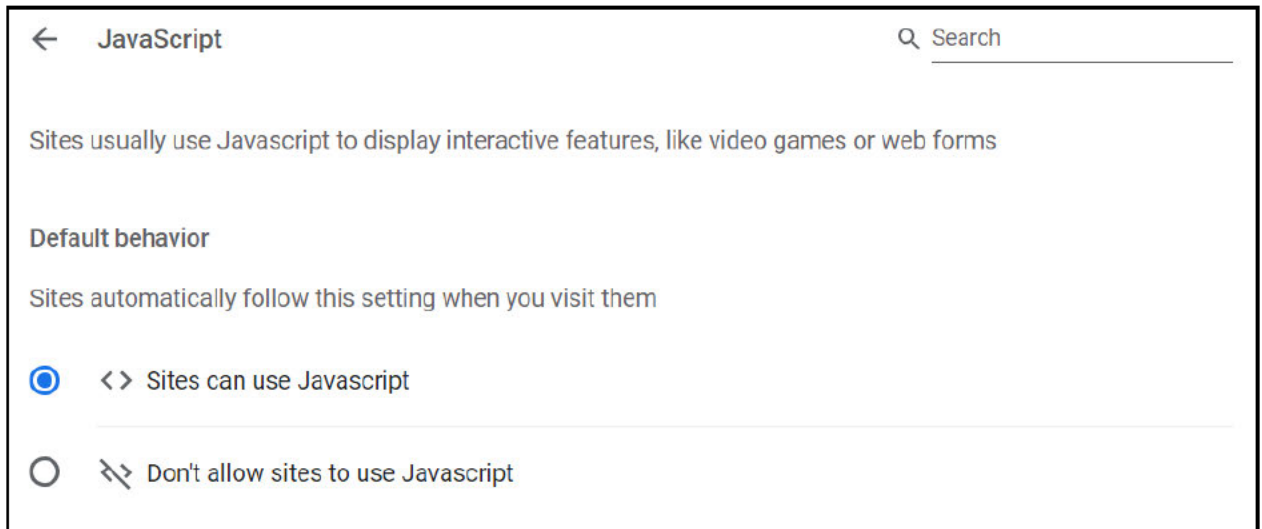
v.   Installing ad-blocking extensions. There are multiple ad-blocking extensions available on the Chrome Web Store that, when installed, can be configured to block Chrome from sending ad requests. Popular examples of those extensions are AdBlock and Adblock Plus.[8] When installed by a user, these ad-blocking extensions may, depending on their configuration, prevent Chrome from sending ad requests to Google Ad Manager. As one example, if a user installs the Adblock Plus extension in PBM mode, enables extensions in PBM mode, and unchecks the "Allow Acceptable Ads" option in the extension's settings, Adblock Plus will prevent Chrome from sending all ad requests to Google Ad Manager.[9] As a result, Google Ad Manager will not receive any of the information described in paragraph 9 above.

---

[8] GOOG-CABR-05558156 - 8161 (https://chrome.google.com/webstore/detail/adblock-%E2%80%94-best-ad-blocker/gighmmpiobklfepjocnamgkkbiglidom?hl=en-US); https://chrome.google.com/webstore/detail/adblock-plus-free-ad-bloc/cfhdojbkjhnklbpkdaibdccddilifddb?hl=en-US.
[9] GOOG-CABR-05558162 - 8167 (https://adblockplus.org/en/acceptable-ads#optout).

1   Below is a screenshot of the description of the Adblock Plus extension on the Chrome

2   Web Store:

Adblock Plus - free ad blocker

Offered by: adblockplus.org

★★★★⯪ 175,347 | Productivity | 👤 10,000,000+ users

Add to Chrome

Overview

🖥 Compatible with your device

Block YouTube™ ads, pop-ups & fight malware!

The Adblock Plus for Chrome™ ad blocker has been downloaded over 500 million times and is one of the most popular and trusted on the market. Users get fast, sleek ad-blocking capabilities to enjoy sites like YouTube™ interruption free.

✓ Block annoying video ads and banners
✓ Block pop ups
✓ Stop tracking and give yourself more privacy
✓ Fight off destructive malvertising that can hide in ads
✓ Give yourself faster browsing (as resources are blocked from loading)
✓ Customize features, like whitelisting for favorite sites
✓ Get free and constant support
✓ Give yourself simply more control of the experience you want

Adblock Plus for Chrome™ is the adblocker to help you fall in love with the internet again, and gives you the chance to customize your experience.

ⓘ To use Adblock Plus, just click on "Add to Chrome". Click on the ABP icon to see how many ads you've blocked, to change your settings, or report an error. It's that easy!

Adblock Plus supports the Acceptable Ads (AA) (www.acceptableads.com) initiative by default, a project that looks for a middle way, to support websites that rely on advertising revenue yet take into account the customer experience. If you do not wish to see Acceptable Ads, this can be turned off at any time: https://adblockplus.org/de/acceptable-ads#optout.

-15-   Case No. 4:20-cv-03664-YGR-SVK
                                       DECLARATION OF GLENN BERNTSON

1   A user can also opt out of personalized ads by installing the Interest-Based

2   Ads Opt-out Add-on.[10] This add-on is a Chrome browser extension available for

3   download at the Chrome Web Store, which indicates that it has "500,000+ users."

4   When installed by a user, and enabled for PBM sessions, this browser extension will

5   similarly rewrite the Biscotti cookie to an "opt-out" value, preventing Google Ad

6   Manager from using the cookie value for personalized ads. Below is a screenshot of

7   the description of the IBA Opt-out Browser Add-on on the Chrome Web Store:

8

IBA Opt-out (by Google)   Add to Chrome

9   Offered by: chrome.google.com

10   ★★★☆☆ 1,715 | Social & Communication | 👤 500,000+ users
     G By Google

11
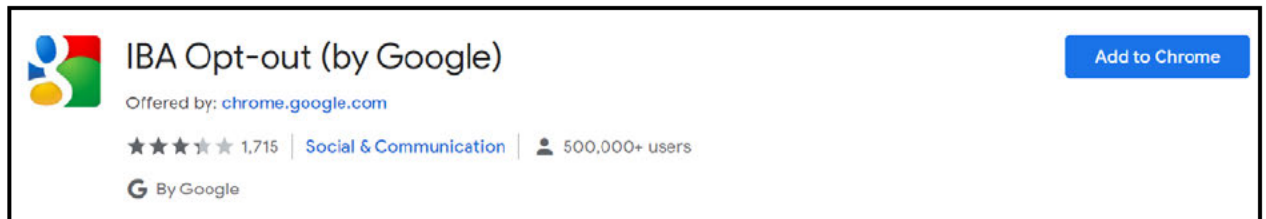
12   Overview

13   💻 Compatible with your device

14   Opt out of Google's interest-based ads as you browse the web with
     Chrome.

15

16   This extension opts you out of the DoubleClick advertising cookie, which
     Google uses to show you interest-based ads on partnering websites.

17

18   - Stops interest-based ads on some of the websites that partner with Google
     - One-time install on Chrome

19   - Opt out remains in effect, even after you clear your browser's cookies

20   For developers
     IBA Opt out extension by Google is available as open source at

21   http://code.google.com/p/google-opt-out-plugin/

22   Terms of Service
     By using IBA Opt out, you agree to the Terms of Service at

23   https://chrome.google.com/extensions/intl/en/gallery_tos.html

24

25

26

27   _____
     [10] *See* GOOG-CABR-05558168 - 8172 (https://chrome.google.com/webstore/detail/iba-opt-out-
28   by-google/
     gbiekjoijknlhijdjbaadobpkdhmoebb).

1

2   Yet another way that users can opt out of Google advertising cookies is by

3   visiting the Network Advertising Initiative's ("NAI's") Opt-Out page.[11] That page

4   allows a user to select "Manage My Browser's Opt-Outs" to detect which NAI

5   members, including Google, may engage in personalized advertising on the browser.

6   If a user opts out of personalized advertising by Google on the NAI webpage during

7   a PBM session, the browser will rewrite the Biscotti cookie to an "opt-out" value, in

8   a similar manner as described above. This will prevent Google Ad Manager from

9   using that cookie value for personalized advertising.

b)   Account-level settings on a user's Google Account can affect whether data sent to Ad Manager is stored and how it is used

10

11   33.   I understand that Plaintiffs have defined the class as users who are not signed in to

12   their Google Account during a PBM session and am therefore only including Google Account

13   controls for completeness. For users who sign in to their Google Accounts during a PBM session,

14   Account-level features and settings in a user's Google Account will affect what data is stored by

15   Google Ad Manager, and how that data is used, including the user's Google Ad Personalization

16   ("GAP") setting. Further, a Google Account holder can visit his or her My Activity when signed

17   into their account to review, manage, and delete the information Google has associated with his or

18   her Google Account, including a list of websites they have visited that use certain Google Services

19   while signed into their Google Account (whether in PBM or not), such as Google's advertising

20   services.

21   34.   As to GAP, users can opt out of Google's use of cookies for personalized advertising

22   by visiting the Google Ad Settings page at adssettings.google.com and turning off "Ad

23   personalization."[12]

24   35.   A user can access the same ad personalization setting for their Google Account by

25   clicking on the AdChoices icon -- -- in an ad that is displayed in their browser. If the ad was

26   served by Google, clicking on that icon will take the user to adssettings.google.com/whythisad,

27

28   ---
[11] GOOG-CABR-05558173 (https://optout.networkadvertising.org/?c=1).
[12] A user can access the same Google Account settings at myaccount.google.com/data-and-privacy and myactivity.google.com/activitycontrols.

which has a link to the ad settings page shown above (note, the above page is shown when the user is signed in to their Google Account; a different page is shown to users who are not signed in).

36.   When Ad Personalization is turned off for a user, Google will not use the information associated with GAIA or Biscotti cookies for personalizing ads, though that information is still collected and used for other purposes like frequency capping, aggregated ad reporting, and to combat fraud and abuse. This means that neither GKS nor BKS are used to serve the user a personalized ad. Instead, that user is shown ads on the basis of other data, such as the website the user is visiting, the time of day, or the user's coarse location.

37.   At myactivity.google.com/activitycontrols, a signed-in user is given the option to click on "Manage activity." If a user does so, the user is taken to their My Activity page which lists websites that use certain Google Services from which Google received data when the user visited those sites, searches conducted, and other activity saved by Google based on a user's interaction with Google Services. Users can also filter their activity based on the type of Google Service that caused the Data to be sent to Google (e.g. "Ads," "Google Analytics," "Search").

38.   If the user chooses not to enable Web & App Activity and has not opted out via AdChoices (https://optout.aboutads.info/), data received by Google Ads is not stored in the user's Account or keyed to information that personally identifies her. Rather, it would be keyed to a pseudonymous cookie that the user can delete from her browser at any time.

3.   Third-party software installed by users can also affect data collection

39.   There are also a number of third-party privacy programs and features that users can employ that affect whether Google Ad Manager receives the PBM data at issue, including proxy servers and VPNs, firewalls, ad blockers, and opt-out features.

    i.   <u>Using a VPN or proxy server</u>. If a PBM user or their network administrator employs a proxy server or VPN (Virtual Private Network) that masks the sending device's IP address, then Google Ad Manager would not receive the user's real IP address. Instead, Google Ad Manager would receive only the IP address assigned by the VPN or proxy server.

ii. <u>Using a firewall</u>. If a PBM user or their network administrator employs a firewall that is configured to allow traffic only to specific domains (not including domains associated with Google Ad Manager), or to prevent traffic to specific domains (including domains associated with Google Ad Manager), then any transmissions that the Chrome browser attempts to send to Google Ad Manager will be blocked by the firewall. Additionally, as described in footnote 2 above, firewalls can also prevent Chrome from receiving the variation IDs that are used to populate the X-Client-Data Header.

iii. <u>Using a standalone ad blocker program</u>. As described above, there are multiple ad-blocking extensions publicly available that, when installed, may block the browser from retrieving ads. Extensions can be downloaded in a non-PBM session and enabled to function in PBM sessions. There are also multiple standalone (not browser extension/plug-in) ad blocker programs that are designed to provide the same ad-blocking functionality. Popular examples of those programs are AdGuard and AdLock.[13] When installed by a user, these ad-blocking programs may, depending on their configuration, prevent a browser from sending any ad requests to Google Ad Manager, thus preventing Google Ad Manager from receiving any of the information described in paragraph 9 above.

C.   Mr. Hochman's Opinions On Conversions And Proposed Approach For Identifying Class Members

40.   I understand that Mr. Hochman opines that "Cross-device conversion tracking in private browsing mode while the user is signed-out uses Google's internal tools such as ▮▮▮▮▮ ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ (Hochman, Appendix F, ¶ 11.) Mr. Hochman is incorrect. As I testified at my first deposition in this case, because (a) mapping for conversions relies on the GAIA and the Biscotti cookie being on a browser at the same

---

[13] https://adguard.com/en/adguard-windows/overview.html; GOOG-CABR-05558146-8149 (https://adlock.com/adlock-for-windows/).

time and (b) for the data at issue in this case the GAIA and the Biscotti cookie are not on a browser at the same time because users are not signed in to their Google Account, there is (c) no mapping from authenticated (GAIA) to the unauthenticated (Biscotti) ID that is unique to a PBM session. [14]

41.   I understand that Mr. Hochman opines that "Google's "maybe_chrome_incognito" bit reliably identifies Incognito traffic." (Hochman ¶ 24.) As I testified at my first deposition in this case, "Incognito mode was designed so that no system like ads or Google Analytics can know whether or not you're in incognito mode . . .". Berntson 30(b)(6) June Tr. 282:11-15. Due to a number of false positives, the "maybe_chrome_incognito" boolean field does not reliably identify Incognito traffic. The "maybe_chrome_incognito" boolean field is based on the absence of the X-Client-Data header. Because the X-Client-Data header—as I testified at my first deposition in this case—is not designed to detect Incognito traffic and is absent for reasons other than a Chrome instance being in Incognito mode, [15] any heuristic that relies on the absence of the header will not reliably detect Incognito traffic.

42.   I understand that Mr. Hochman opines that Google can identify class members by fingerprinting IP addresses and User-Agent. (Hochman ¶ 227, "Google can readily use the data at issue in this lawsuit (collected from private browsing during the class period) to identify users and their devices.") Google does not combine IP addresses and User-Agent to identify, or re-identify, users and has long-standing policies against engaging in such fingerprinting. [16]

43.   I understand that Mr. Hochman states that "Through Google's server-side processes such as the ██ ██ ██ ████ Google creates 'a single-view of the user in all Display products' for ad targeting and measurement purposes." Hochman ¶ 184 (cleaned up). Mr. Hochman appears to assume that ████

---

[14] Berntson Tr. (Brown v. Google) 372:8-373:16.
[15] Berntson Tr. (Brown v. Google) 374:11-376:11.
[16] GOOG-BRWN-00029326, "Device/App/Browser Fingerprinting and Immutable Identifiers Policy" ("Device/App/Browser Fingerprinting or Immutable Identifiers must not be used by any Google products or services for the purpose of: Tracking user behavior, including Ad measurement and prediction, Ad targeting, Recording preferences").

1   maps GAIA IDs to Biscotti and Zwieback Not-GAIA IDs. That is a flawed assumption. In fact, ███

2   ██

3   ███████████████████████████████████████. As I testified at length at my first deposition in this case,

4   ██

5   ██.[17] ███████████████████████████

6   ██

7   █████████████████████████

8   / / /

9   / / /

10   / / /

11   / / /

12   / / /

13   / / /

14   / / /

15   / / /

16   / / /

17   / / /

18   / / /

19   / / /

20   / / /

21   / / /

22   / / /

23   / / /

24   / / /

25   / / /

26   / / /

27

28

---

[17] Berntson Tr. (Brown v. Google) 121:10-123:7.

1   I declare under penalty of perjury under the laws of the United States of America that the

2   foregoing is true and correct to the best of my knowledge. Executed in Jersey City, New Jersey on

3   August 4, 2022.

4

5   DocuSigned by:

     Glenn Berntson

     048F0F988D984AA...

6   Glenn Berntson

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

-22-   Case No. 4:20-cv-03664-YGR-SVK

DECLARATION OF GLENN BERNTSON